CLAIMS

1. A prodrug comprising a drug moiety bound to a carrier framework, the prodrug being activated by aromatic oxidation of the carrier framework to release the drug moiety.

2. A prodrug according to claim 1, being activated by aromatic hydroxylation.

3. A prodrug according to claim 2, being activated by enzymatic aromatic hydroxylation.

4. A prodrug according to any one of the preceding claims, being an anti-tumour prodrug.

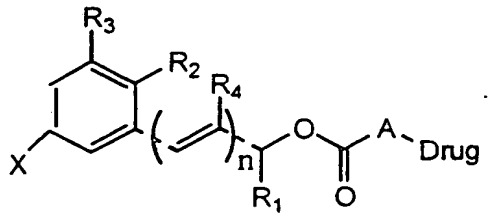
5. A prodrug according to any one of the preceding claims, the drug moiety being a cytotoxic or cytostatic agent.

6. A prodrug according to claim 5, a cytotoxic drug moiety being selected from any one of the group of colchicine, esperimycin, taxol, daunomycin, staurosporin, nitrogen mustard, and 5-fluorouracil.

7. A prodrug according to any one of the preceding claims, being activated by hydroxylation by CYP1B1.

8. A prodrug according to any one of the preceding claims, the drug moiety being an antimitotic agent, an alkylating agent, an antifolate, an antimetabolite, a DNA-damaging agent or an enzyme inhibitor.

9. A prodrug according to any one of the preceding claims, having the formula (Z):



wherein:

X = H, OH, OMe or $N(CH_3)_2$; and

n = 0-6;

and:

R_1 = H, C_{1-4} lower alkyl, or together with R_2 forms part of a cycloalkyl group which may be further substituted to form part of a polycyclic cycloalkyl group, or with R_2 forms part of a steroidal carbon framework;

R_2 = H, OMe, C_{1-4} lower alkyl, or together with R_1 and/or R_3 forms part of a cycloalkyl, polycyclic cycloalkyl or steroidal carbon framework, or forms part of a polycyclic aromatic group by linkage to R_4;

R_3 = H, OMe, C_{1-4} lower alkyl or together with R_2 forms part of a cycloalkyl, polycyclic cycloalkyl or steroidal carbon framework; and

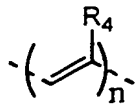
R_4 = H or is fused directly to the aromatic position designated by R_2

and either:

the drug moiety is derived from a drug having a free amino, hydroxyl or thiol group and which links it to the rest of the prodrug, such that A represents NH, NR (R=C_{1-4} lower alkyl), O or S; or

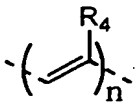
the drug moiety is derived from a drug having a carboxylate group, an ester linkage joining it to the rest of the prodrug and A being absent

10. A prodrug according to claim 9, the olefin linkage



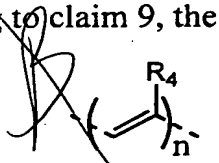
having a cis- or trans-geometry.

11. A prodrug according to claim 9, the olefin linkage



being acyclic or cyclic.

12. A prodrug according to claim 9, the olefin linkage



forming part of an aromatic or polycyclic aromatic system.

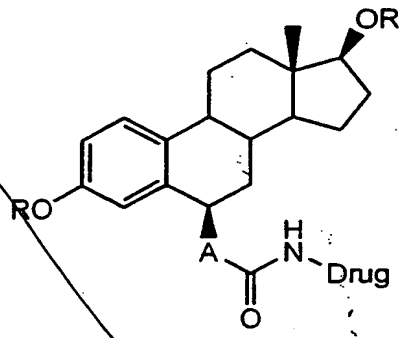
13. A prodrug according to any one of the preceding claims, the linkage to the drug moiety from the carrier framework being from a hydroxyalkyl group in the prodrug *via* a carbamate, carbonate or thiocarbonate linker to an amino, hydroxy or thiol group in the drug moiety.

14. A prodrug according to any one of the preceding claims, having a steroid carbon carrier framework.

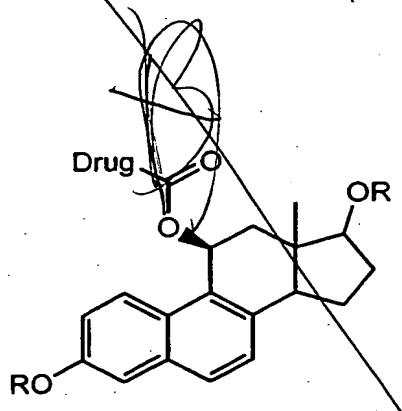
15. A prodrug according to claim 14, being derived from estradiol.

16. A prodrug according to claim 15, having the formula of any one of formulae (I) - (IX):

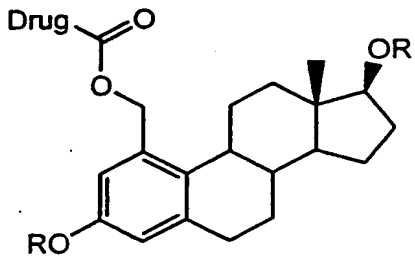
(I):



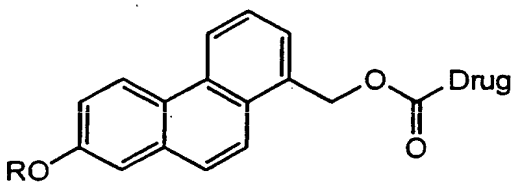
(II):



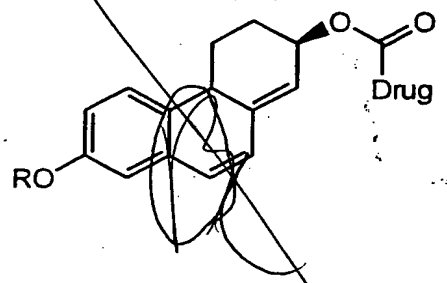
(III):



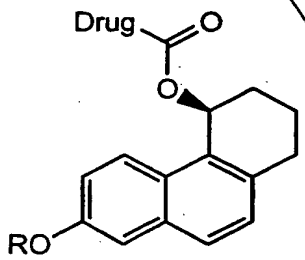
(IV):



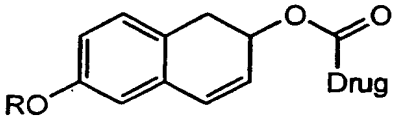
(V):



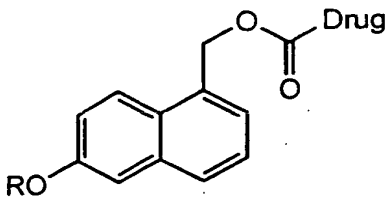
(VI):



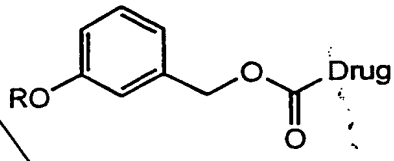
(VII):



(VIII):



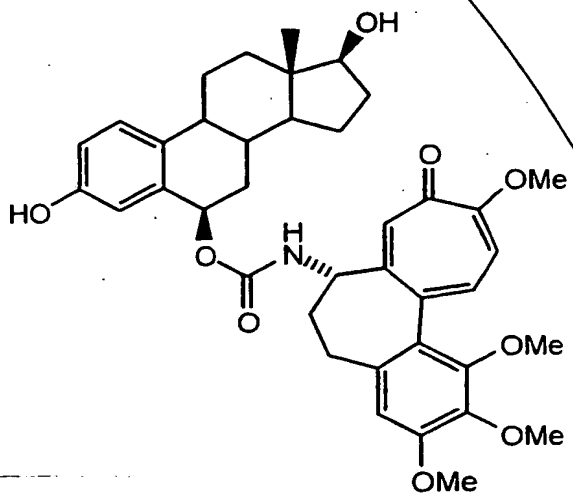
(IX):



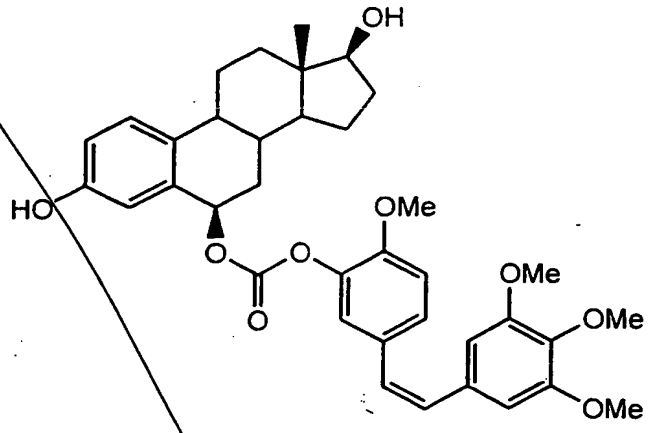
wherein -OR = -OMe or -OH

17. A prodrug according to claim 15, having the formula of any one of Formulae (X) - (XIII):

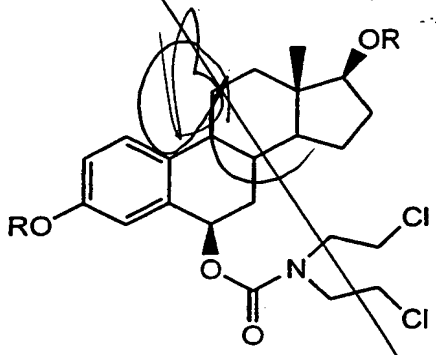
(X):



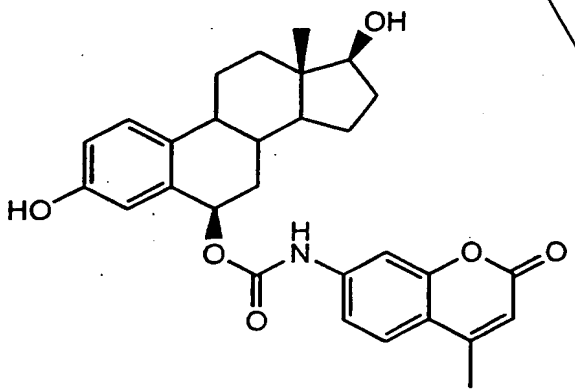
(XI):



(XII):



(XIII):



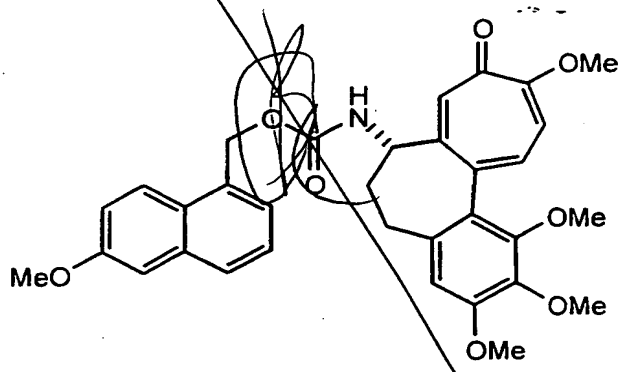
where R = H (Formula XIIa) or R=Me (Formula XIIb)

18. A prodrug according to any one of claims 1-13. having a polycyclic aromatic carrier framework.

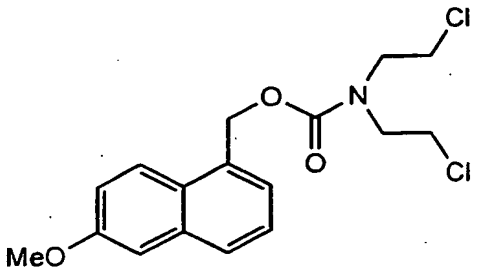
19. A prodrug according to claim 18, being based on either one of the group of a naphthyl and phenanthryl structures.

20. A prodrug according to claim 19, having the formula of any one of formulae (XIV) - (XVII):

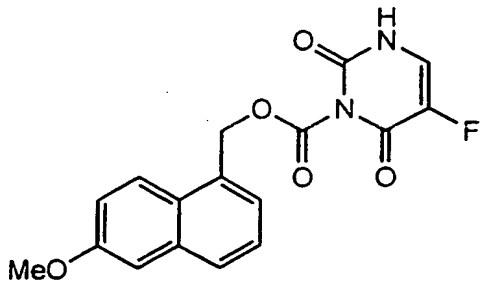
(XIV):



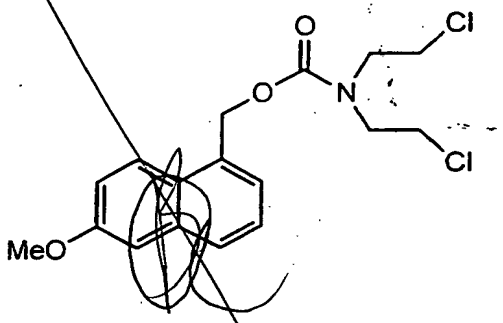
(XV):



(XVI):

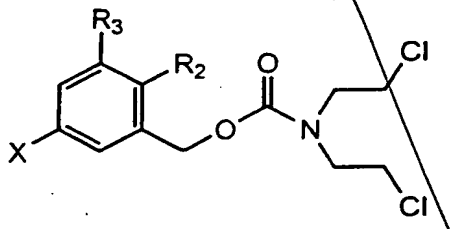


(XVII):



21. A prodrug according to any one of claims 1-13, having a substituted benzyl carrier framework.

22. A prodrug according to claim 21, having the general formula (Y):



R_2, R_3 and X being selected from any one of the group of:

a) R_2 = H, R_3 = H, X = OMe (Formula XVIII);

b) R_2 = H, R_3 = OMe, X = OMe (Formula XIX);

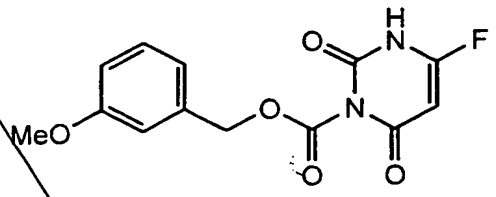
c) R_2 = H, R_3 = H, X = H (Formula XX);

d) R_2 = OMe, R_3 = H, X = H (Formula XXI); and

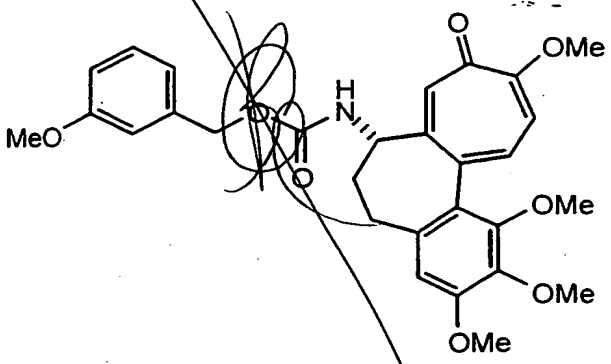
e) R_2 = OMe, R_3 = H, X = OMe (Formula XXII).

23. A prodrug according to claim 21, having the formula of any one of formulae (XXIII) - (XXVIII):

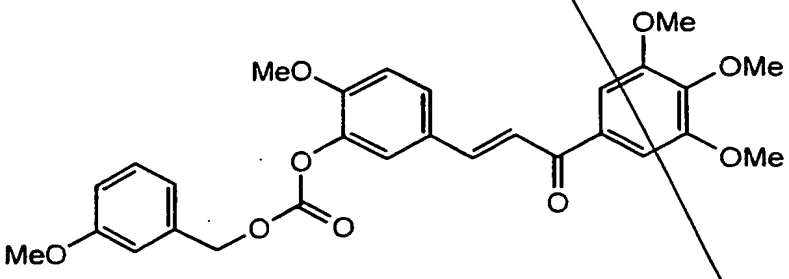
(XXIII):



(XXIV):

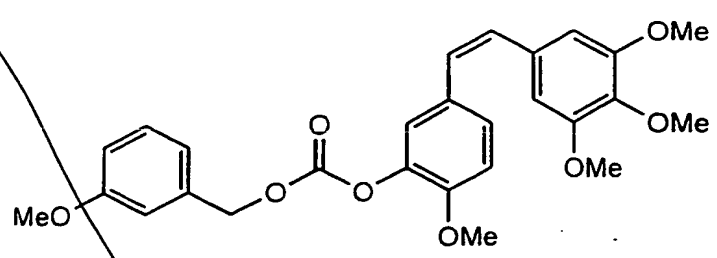


(XXV):

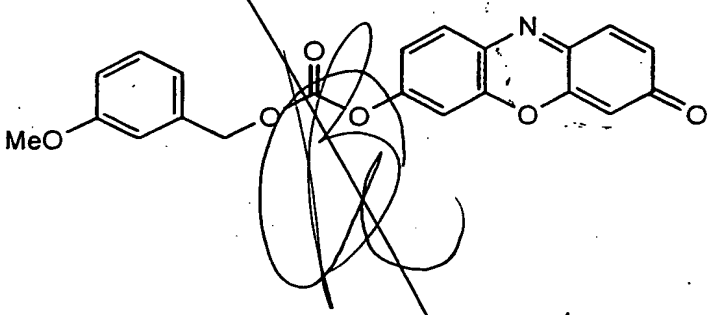


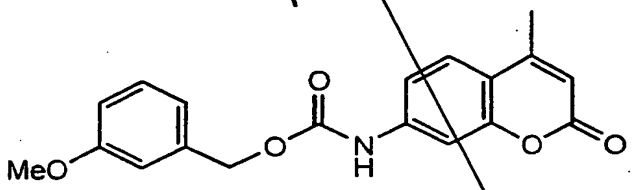
(XXVI):

(XXVII):



(XXVIII):

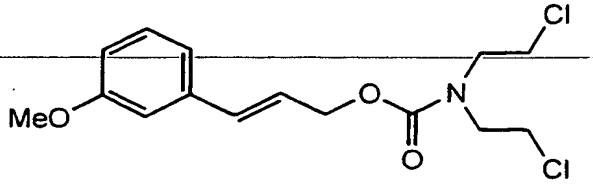




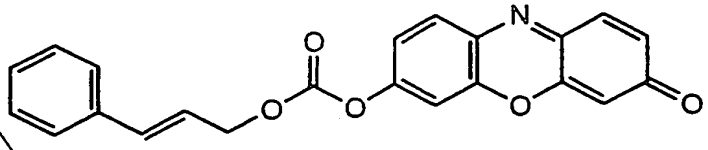
24. A prodrug according to any one of claims 1-13, having a cinnamyl carrier framework.

25. A prodrug according to claim 24, having the formula of any one of formulae (XXX) - (XXXII):

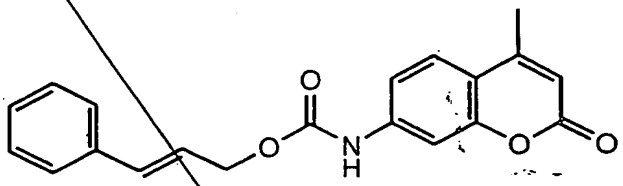
(XXX):



(XXXI):



(XXXII):



26. A prodrug according to any one of the preceding claims, its aromatic oxidation being by hydroxylation and causing the release of the drug moiety and carbon dioxide.

27. A prodrug according to any one of the preceding claims, for use in a method of treatment or diagnosis of the human or animal body.

28. The use of a prodrug according to any one of the claims 1-26 in the manufacture of a medicament for the treatment of a tumour.

29. A method of manufacture of a medicament for the treatment of a tumour, comprising the use of a prodrug according to any one of claims 1-26.

30. A method of treatment of a patient, comprising administering to the patient a prodrug according to any one of claims 1-26

31. A method of treatment according to claim 30, being a method of treatment of a tumour.

32. A method of detection of aromatic oxidation, comprising the steps of:

I) contacting a sample with a prodrug according to any one of claims 1-26;

ii) detecting any product of aromatic oxidation of the prodrug; and

iii) correlating detection of the product of aromatic oxidation of the prodrug with aromatic oxidation activity.

33. A method according to claim 32, the aromatic oxidation activity being enzymatic.

34. A method according to claim 33, the aromatic oxidation activity being CYP1B1 aromatic oxidation activity.

35. A method according to any one of claims 32-34, being a method of detection of tumour cells.

36. A method according to any one of claims 32-35, being a method of diagnosis of the human or animal body.